

AQUAPLAN

DISEASE INFORMATION LEAFLET

VIBRIOSIS

BACKGROUND

- Vibriosis is a systemic bacterial infection caused by a gram negative, motile, rod shaped bacteria of the family *Vibrionaceae*.
- *Vibrio* spp. are commonly found in the aquatic environment, the majority of which are non-pathogenic. The species causing the most economically serious diseases are *Vibrio (Listonella) anguillarum*, *Vibrio ordalii*, *Vibrio salmonicida* and *Vibrio (Moritella) viscosus*.
- Vibriosis has a worldwide distribution and occurs primarily in marine and estuarine fish species, including Atlantic salmon, rainbow trout, brown trout, cod and turbot.
- Vibriosis occasionally occurs in marine reared fish in Ireland, such as salmon or cod.

CLINICAL SIGNS

- Initial signs of the disease include anorexia, skin darkening and sudden death.
- Clinical signs include a generalised septicaemia with redness at the base of the fins, swollen and opaque eyes and the development of skin lesions which can form ulcers.
- Gills are usually pale indicating anaemia and the kidney and spleen can become enlarged.
- Internally blood spotting of the viscera and musculature are common. There may be bloody fluid in the body cavity.

DIAGNOSIS

- Histopathology shows multifocal necrosis and haemorrhage in the visceral organs and skeletal muscle. Meningitis may also be observed.
- Diagnosis can be confirmed by the isolation and identification of the particular species of *Vibrio* involved using serological or molecular based methods.
- Marine vibrios grow on general purpose media containing salt, forming smooth, convex, white colonies.
- *Vibrio* spp. can be differentiated from *Aeromonas* spp. by their specific sensitivity to the vibriostat O/129.

CONTROL

- Disease spread mainly occurs by horizontal transmission of the bacteria through the water and from contact with infected fish.
- Antibiotic treatments are effective; although resistance can be observed and sensitivity testing is required (all antibiotic treatment requires veterinary supervision and a prescription).
- Vaccination is an effective form of control, but unvaccinated stocks remain vulnerable where the water supply contains wild fish. There are several commercially produced vaccines available.

WHAT SHOULD I DO?

- Minimise potentially stressful procedures such as handling and grading when vibriosis is suspected or confirmed.
- As vibriosis is not listed under Council Directive 2006/88/EC, control of the disease is a matter for the operator and the retained veterinary practitioner.
- Strict biosecurity measures should be implemented around the infected site.
- Remove moribund and dead fish from infected pens daily. Mortalities should be disposed of in accordance with current Animal By-Products Regulations.
- If the vet notices a change in the nature of the infection and suspects a more virulent disease is emerging or alternatively, if a disease is suspected in a new host species, you should contact the Fish Health Unit of the Marine Institute. If you suspect the presence of a listed disease you should also notify the Marine Institute.

